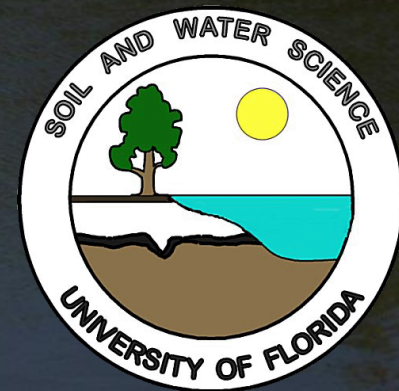


Examining Relationships Between Hard Clam Farming Activities and Subaqueous Soil Properties

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Background

- Clams live in the subaqueous soil
- We are striving to understand affects of various soil properties on clams

What about what WE do to the soil?

Effect of Farming on Soil?

- Inside the bag, clams burrow down into soil.
- When the bag is removed, so to is some of the soil.
- What happens next?

What Happens Post-Harvest?

- When we remove a bag, is there a depression left?
- If so, does the depression fill with sediment?
- What is the resultant composition of the new soil?
- How might intensity of farming affect this?

Objectives

- Compare/contrast subaqueous soils at high and low density
- Compare to adjacent un-farmed
- Continue soil/landscape inventory

Previous Work

- Spatial inventory of Dog Island soil and bathymetry

Soil Elevation (Bathymetry)

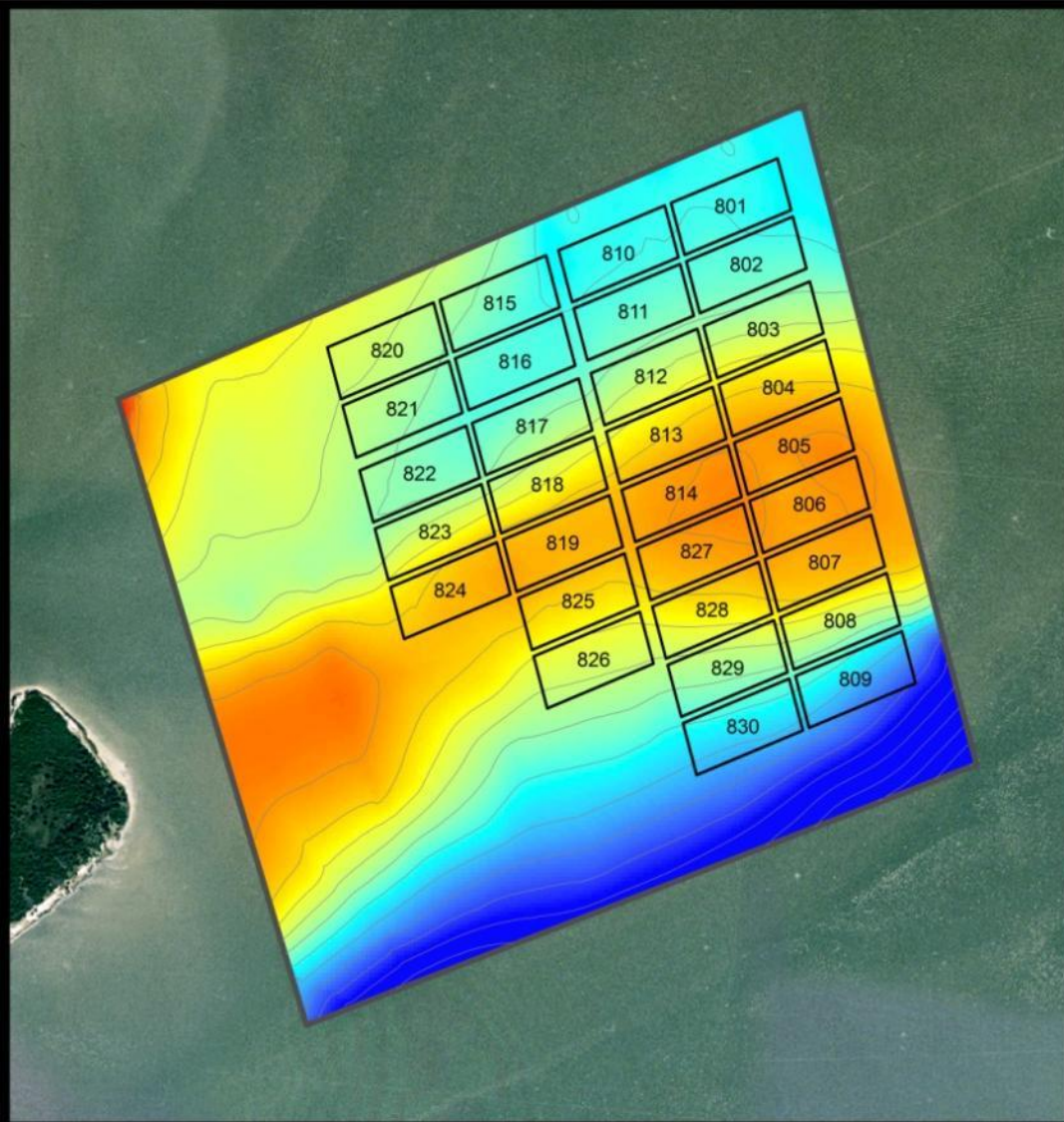
High Elevation

1.5 ft NAD88

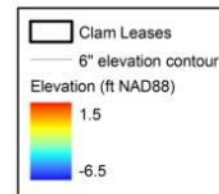
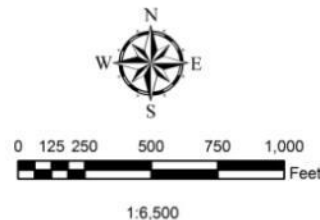


-6.5 NAD88

Low Elevation



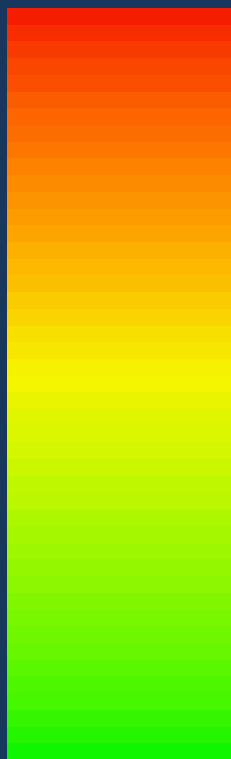
Dog Island Lease Area Map Series: Bathymetry



Bathymetric data were collected throughout the lease area, converted to NAD88 by correcting for tidal fluctuations via the NOAA tidal gauge in Cedar Key, and spatially modeled using the ArcGIS. The basemap is a 2001 true-color aerial photograph mosaic provided by the Suwannee River Water Management District.

Soil Organic Matter

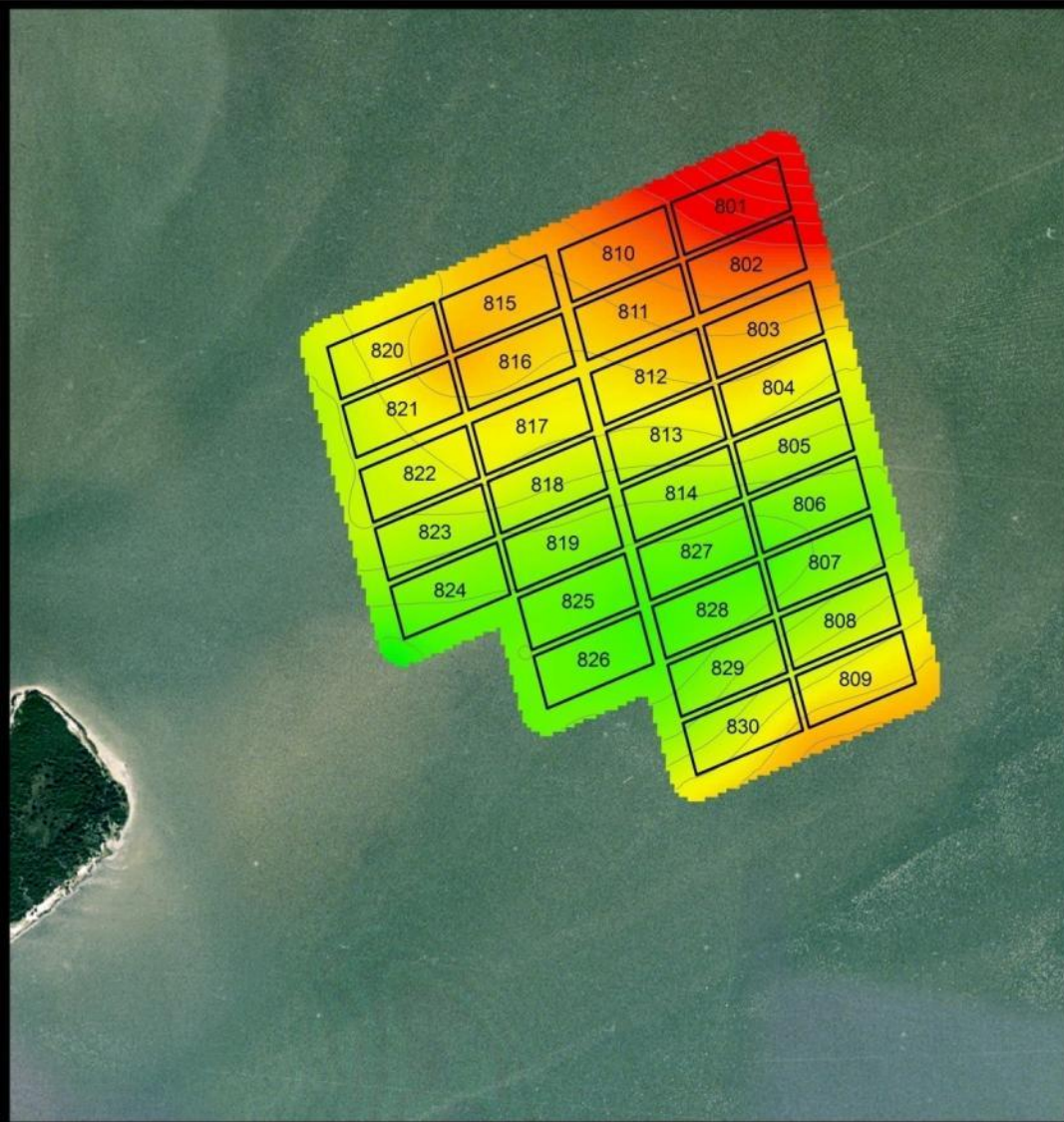
High OM



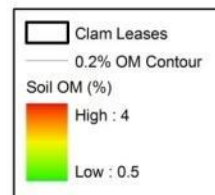
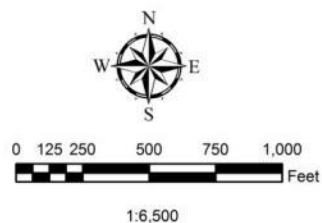
4%

0.5%

Low OM



Dog Island Lease Area Map Series: Soil Organic Matter



This map depicts the spatial distribution of soil organic matter (OM) throughout the clam lease area. This distribution was estimated using geostatistical modeling techniques employed via ArcGIS to model loss on ignition values of soil samples collected at the intersections of the navigation channels. The basemap is a 2001 true-color aerial photograph mosaic provided by the Suwannee River Water Management District.

Soil Particle Size (%Clay)

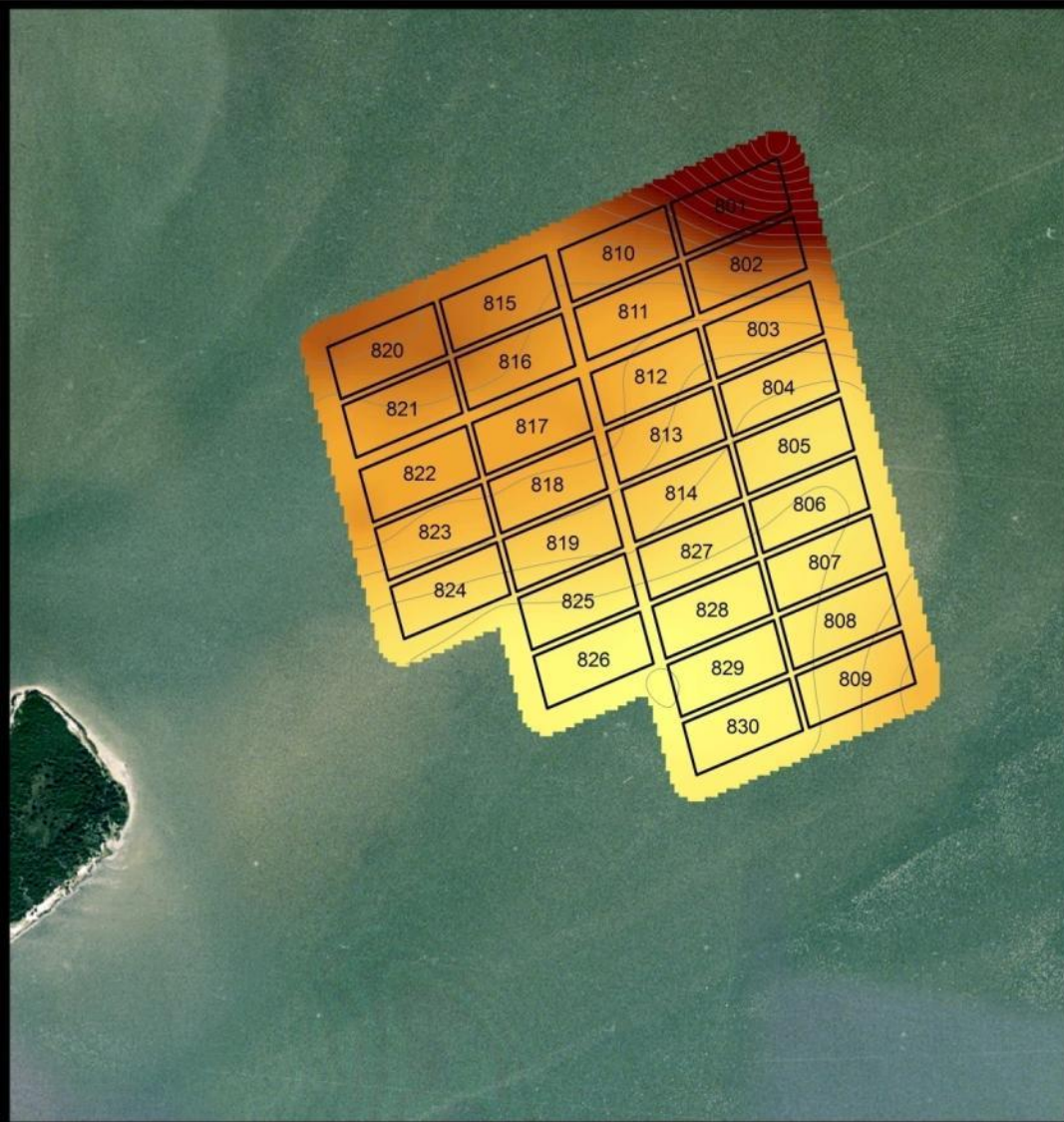
High Clay

5%

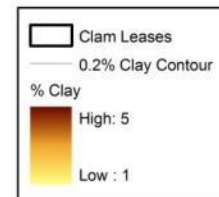
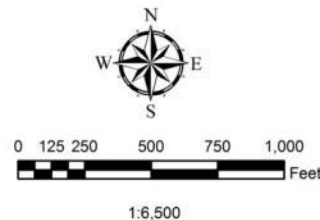


1%

Low Clay



Dog Island Lease Area Map Series: Clay Content



This map depicts the spatial distribution of soil clay content throughout the clam lease area. The distribution was estimated using geostatistical modeling techniques employed via ArcGIS to model percent clay of samples from the intersections of navigation channels. The basemap is a 2001 true-color aerial photograph mosaic provided by the Suwannee River Water Management District.

What Can You Do?

- Please speak with Leslie if you are interested in helping us learn how to best maximize the land for aquiculture.
- Say hi. We really have enjoyed our conversations with you over the years 😊

Soil science serves agriculture,
so we are here to serve you.